(II)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

$R^{31}$ is a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system substituted with 0-4 $R^{10}$ or $R^{10a}$;

$R^{32}$ is selected from:
-C(=O)-;
-C(=S)-
-S(=O)2-;
-S(=O)-;
-P(=Z)(Z$R^{13}$)-;

Z is S or O;

n" and n' are independently 0-2;

$R^1$ and $R^{22}$ are independently selected from the following groups:

hydrogen,
C1-C8 alkyl substituted with 0-2 $R^{11}$;
C2-C8 alkenyl substituted with 0-2 $R^{11}$;
C2-C8 alkynyl substituted with 0-2 $R^{11}$;
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, -CF3, -CN, -CO2R13, -C(=O)R13, -C(=O)N(R13)2, -CHO, -CH2OR13, -OC(=O)R13, -OC(=O)OR13a, -OR13, -OC(=O)N(R13)2, -NR13C(=O)R13, -NR14C(=O)OR13a, -NR13C(=O)N(R13)2, -NR14SO2N(R13)2, -NR14SO2R13a, -SO3H, -SO2R13a, -SR13, -S(=O)R13a, -SO2N(R13)2, -N(R13)2, -NHC(=NH)NHR13, -C(=NH)NHR13, =NOR13, NO2, -C(=O)NHOR13, -C(=O)NHNR13R13a, -OCH2CO2H, 2-(1-morpholino)ethoxy;

R1 and R21 can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 R12;

when n' is 2, R1 or R21 can alternatively be taken together with R1 or R21 on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between said carbon atoms;

R22 and R23 can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 R12;

when n" is 2, R22 or R23 can alternatively be taken together with R22 or R23 on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between the adjacent carbon atoms;

R1 and R2, where R21 is H, can alternatively join to form a 5-8 membered carbocyclic ring substituted with 0-2 R12;

R11 is selected from one or more of the following:

=O, F, Cl, Br, I, -CF3, -CN, -CO2R13, -C(=O)R13, -C(=O)N(R13)2, -CHO, -CH2OR13, -OC(=O)R13, -OC(=O)OR13a,

$-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C5 alkyl, C2-C4 alkenyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C2-C6 alkoxyalkyl, C3-C6 cycloalkoxy, C1-C4 alkyl (alkyl being substituted with 1-5 groups selected independently from: $-NR^{13}R^{14}$, $-CF_3$, $NO_2$, $-SO_2R^{13a}$, or $-S(=O)R^{13a}$),

aryl substituted with 0-2 $R^{12}$,

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

$R^{12}$ is selected from one or more of the following: phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)-$OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl, C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy,

C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form $-(CH_2)_{2-5}-$ or $-(CH_2)O(CH_2)-$;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

$R^{21}$ and $R^{23}$ are independently selected from:

hydrogen;
C1-C4 alkyl, optionally substituted with 1-6 halogen;
benzyl;

$R^2$ is H or C1-C8 alkyl;

$R^{10}$ and $R^{10a}$ are selected independently from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)N(R^{13})_2$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$,

C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)$-OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl (including -CvFw where v = 1 to 3 and w = 1 to (2v+1)), C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

J is 3-aminopropionic acid or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or C1-C8 alkyl;

$R^4$ is H or C1-C3 alkyl;

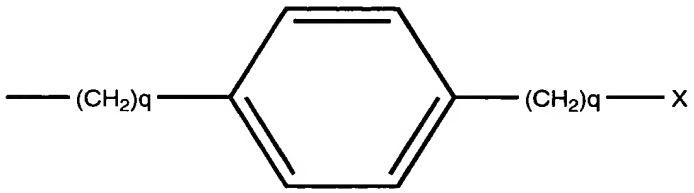
$R^5$ is selected from:
hydrogen;
C1-C8 alkyl substituted with 0-2 $R^{11}$;
C2-C8 alkenyl substituted with 0-2 $R^{11}$;
C2-C8 alkynyl substituted with 0-2 $R^{11}$;
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

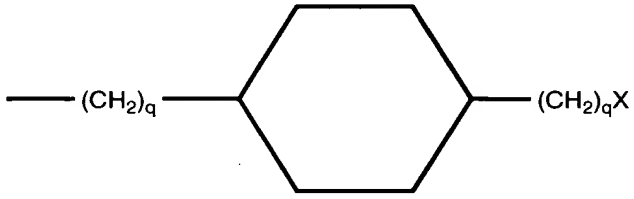
a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, or O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, -CF3, -CN, -CO2R13, -C(=O)R13, -C(=O)N(R13)2, -CHO, -CH2OR13, -OC(=O)R13, -OC(=O)OR13a, -OR13, -OC(=O)N(R13)2, -NR13C(=O)R13, -NR14C(=O)OR13a, -NR13C(=O)N(R13)2, -NR14SO2N(R13)2, -NR14SO2R13a, -SO3H, -SO2R13a, -SR13, -S(=O)R13a, -SO2N(R13)2, -N(R13)2, -NHC(=NH)NHR13, -C(=NH)NHR13, =NOR13, NO2, -C(=O)NHOR13, -C(=O)NHNR13R13a, =NOR13, -B(R34)(R35), -OCH2CO2H, 2-(1-morpholino)ethoxy, -SC(=NH)NHR13, N3, -Si(CH3)3, (C1-C5 alkyl)NHR16;

-(C0-C6 alkyl)X;



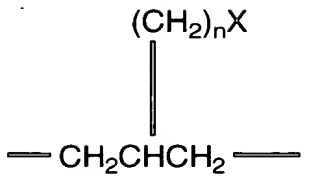

, where q is independently 0,1;



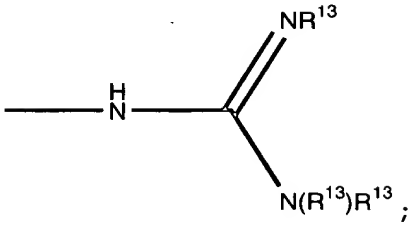

;

-(CH2)mS(O)p'(CH2)2X, where m = 1,2 and p' = 0-2; and

R3 and R4 may also be taken together to form




, where n = 0,1 and X is




;

$R^3$ and $R^5$ can alternatively be taken together to form -(CH2)t- or -CH2S(O)p'C(CH3)2-, where t = 2-4 and p' = 0-2; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

q)
Cont

$R^{16}$ is selected from:

an amine protecting group;

1-2 amino acids;

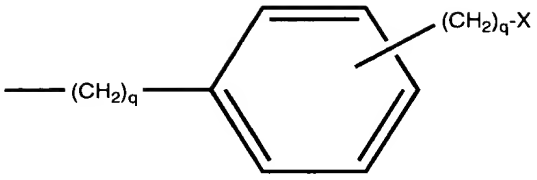
1-2 amino acids substituted with an amine protecting group;

K is a D-isomer or L-isomer amino acid of structure $N(R^6)CH(R^7)C(=O)$-, wherein:

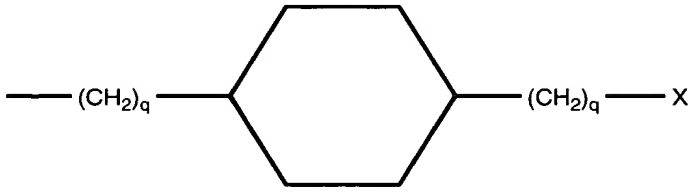
$R^6$ is H or C1-C8 alkyl;

$R^7$ is selected from:

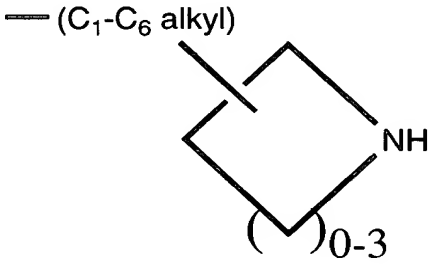
-(C1-C7 alkyl)X;




, wherein each q is independently 0-2 and substitution on the phenyl is at the 3 or 4 position;




, wherein each q is independently 0-2 and substitution on the cyclohexyl is at the 3 or 4 position;

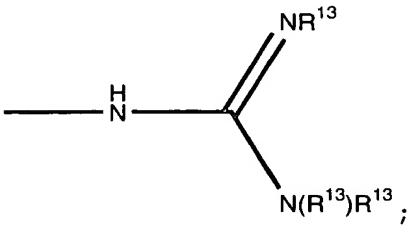



;

-(CH2)mO-(C1-C4 alkyl)-X, where m = 1 or 2;

-(CH2)mS(O)p'-(C1-C4 alkyl)-X, where m = 1 or 2 and p' = 0-2; and

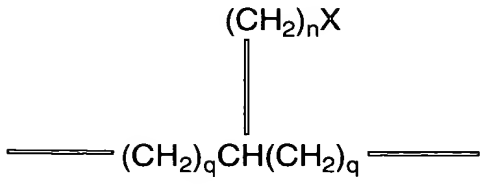
X is selected from:



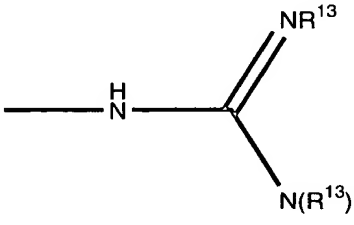

;

-N(R13)R13; -C(=NH)(NH2); -SC(=NH)-NH2; -NH-C(=NH)(NHCN); -NH-C(=NCN)(NH2); -NH-C(=N-OR13)(NH2);

$R^6$ and $R^7$ can alternatively be taken together to form



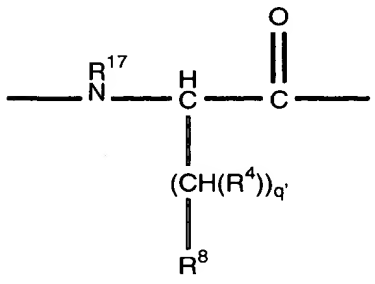
, wherein each q is independently 1 or 2 and wherein n = 0 or 1 and X is -NH2

or  ;

L is -Y(CH2)vC(=O)-, wherein:

Y is NH, N(C1-C3 alkyl), O, or S; and v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected

independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$;

$R^{34}$ and $R^{35}$ are independently selected from:
-OH,
-F,
$-N(R^{13})_2$, or
C1-C8-alkoxy;

$R^{34}$ and $R^{35}$ can alternatively be taken together form:

a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

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a divalent cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O.

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**Please add new claims 20-58:**

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20. (New) The method of Claim 17 wherein the localization step comprises the step of localizing a compound of the formula (I), and pharmaceutically acceptable salts thereof, at the thrombus:

$$|(Q)d'-L_n-C_h.|x-M_r(A_{L1})y(A_{L2})z$$

(I),

wherein,

Q is a glycoprotein IIb/IIIa binding compound;

d' is 1 - 20;

Ln is a linking group of formula:

$M^1$-[$Y^1$($CR^{55}R^{56}$)f($Z^1$)f"$Y^2$]f'-$M^2$,

wherein:

$M^1$ is -[(CH2)g$Z^1$]g'-($CR^{55}R^{56}$)g"-;

$M^2$ is -($CR^{55}R^{56}$)g"-[$Z^1$(CH2)g]g'-;

g is independently 0-10;

g' is independently 0-1;

g" is independently 0-10;

f is independently 0-10;

f' is independently 0-10;

f" is independently 0-1;

$Y^1$ and $Y^2$, are independently selected at each occurrence from: a bond, O, $NR^{56}$, C=O, C(=O)O, OC(=O)O, C(=O)NH-, $C=NR^{56}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), and (NH)2C=S;

$Z^1$ is independently selected at each occurrence from a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system, substituted with 0-4 $R^{57}$; and a heterocyclic ring system, substituted with 0-4 $R^{57}$;

$R^{55}$ and $R^{56}$ are independently selected at each occurrence from: hydrogen; C1-C10 alkyl substituted with 0-5 $R^{57}$; and alkaryl wherein the aryl is substituted with 0-5 $R^{57}$;

$R^{57}$ is independently selected at each occurrence from the group: hydrogen, OH, $NHR^{58}$, $C(=O)R^{58}$, $OC(=O)R^{58}$, $OC(=O)OR^{58}$, $C(=O)OR^{58}$, $C(=O)NR^{58}$, C≡N, $SR^{58}$, $SOR^{58}$, $SO_2R^{58}$, $NHC(=O)R^{58}$, $NHC(=O)NHR^{58}$, $NHC(=S)NHR^{58}$; or, alternatively, when attached to an additional molecule Q, $R^{57}$ is independently selected at each occurrence from the group: O, $NR^{58}$, C=O, C(=O)O, OC(=O)O, C(=O)N-, $C=NR^{58}$, S, SO, $SO_2$, $SO_3$, NHC(=O), $(NH)_2C(=O)$, $(NH)_2C=S$; and,

Q 2
Cont

$R^{58}$ is independently selected at each occurrence from the group: hydrogen; C1-C6 alkyl; benzyl, and phenyl;

$M_T$ is a transition metal radionuclide;

$C_h$ is a radionuclide metal chelator or bonding unit bound to the transition metal radionuclide selected from the group consisting of: $R^{40}N=N^+=$, $R^{40}R^{41}N-N=$, $R^{40}N=$, or $R^{40}N=N(H)-$;

$R^{40}$ is independently selected at each occurrence from the group: a bond to Ln, C1-C10 alkyl substituted with 0-3 $R^{52}$, aryl substituted with 0-3 $R^{52}$, cycloaklyl substituted with 0-3 $R^{52}$, heterocycle substituted with 0-3 $R^{52}$, heterocycloalkyl substituted with 0-3 $R^{52}$, aralkyl substituted with 0-3 $R^{52}$ and alkaryl substituted with 0-3 $R^{52}$;

$R^{41}$ is independently selected from the group: hydrogen, aryl substituted with 0-3 $R^{52}$, C1-C10 alkyl substituted with 0-3 $R^{52}$, and a heterocycle substituted with 0-3 $R^{52}$;

$R^{52}$ is independently selected at each occurrence from the group: a bond to Ln, =O, F, Cl, Br, I, -CF3, -CN, $-CO_2R^{53}$, $-C(=O)R^{53}$, $-C(=O)N(R^{53})_2$, -CHO, $-CH_2OR^{53}$, $-OC(=O)R^{53}$, $-OC(=O)OR^{53a}$, $-OR^{53}$, $-OC(=O)N(R^{53})_2$, $-NR^{53}C(=O)R^{53}$, $-NR^{54}C(=O)OR^{53a}$, $-NR^{53}C(=O)N(R^{53})_2$, $-NR^{54}SO_2N(R^{53})_2$, $-NR^{54}SO_2R^{53a}$, $-SO_3H$, $-SO_2R^{53a}$, $-SR^{53}$, $-S(=O)R^{53a}$, $-SO_2N(R^{53})_2$, $-N(R^{53})_2$, $-NHC(=NH)NHR^{53}$, $-C(=NH)NHR^{53}$, $=NOR^{53}$, $NO_2$, $-C(=O)NHOR^{53}$, $-C(=O)NHNR^{53}R^{53a}$ , $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

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$R^{53}$, $R^{53a}$, and $R^{54}$ are each independently selected at each occurrence from the group: hydrogen, C1-C6 alkyl, and a bond to Ln;

$A_{L1}$ is a first ligand wherein each of the y first ligands are selected from the group consisting of: dioxygen ligands, functionalized aminocarboxylates, halides, and combinations thereof;

$A_{L2}$ is a second ligand wherein each of the z second ligands are selected from the group consisting of: trisubstituted phosphines, trisubstituted arsines, tetrasubstituted diphosphines, tetrasubstituted diarsines, and combinations thereof;

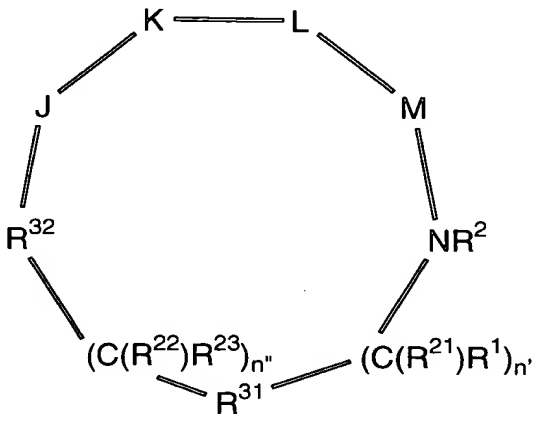
x is independently 1-2;

y is independently 1-2; and

z is independently 0-4.

21. (New) The method of Claim 20 wherein $M_T$ is selected from the group consisting of: technetium-99m, rhenium-186, and rhenium-188.

22. (New) The method of Claim 20 wherein the localization step comprises the step of localizing a compound of the formula (I) at the pulmonary embolus wherein Q is of the formula (II),




(II)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

$R^{31}$ is a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system substituted with 0-4 $R^{10}$ or $R^{10a}$;

$R^{32}$ is selected from:
-C(=O)-;
-C(=S)-
-S(=O)2-;
-S(=O)-;
-P(=Z)(Z$R^{13}$)-;

Z is S or O;

n" and n' are independently 0-2;

$R^1$ and $R^{22}$ are independently selected from the following groups:

hydrogen,
C1-C8 alkyl substituted with 0-2 $R^{11}$;
C2-C8 alkenyl substituted with 0-2 $R^{11}$;
C2-C8 alkynyl substituted with 0-2 $R^{11}$;
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, -CF3, -CN, -CO2$R^{13}$, -C(=O)$R^{13}$, -C(=O)N($R^{13}$)2, -CHO, -CH2O$R^{13}$, -OC(=O)$R^{13}$, -OC(=O)O$R^{13a}$,

$-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

$R^1$ and $R^{21}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n' is 2, $R^1$ or $R^{21}$ can alternatively be taken together with $R^1$ or $R^{21}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between said carbon atoms;

$R^{22}$ and $R^{23}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n" is 2, $R^{22}$ or $R^{23}$ can alternatively be taken together with $R^{22}$ or $R^{23}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between the adjacent carbon atoms;

$R^1$ and $R^2$, where $R^{21}$ is H, can alternatively join to form a 5-8 membered carbocyclic ring substituted with 0-2 $R^{12}$;

$R^{11}$ is selected from one or more of the following:

=O, F, Cl, Br, I, $-CF_3$, $-CN$, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, $-CHO$, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$,

$-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy,

C1-C5 alkyl, C2-C4 alkenyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C2-C6 alkoxyalkyl, C3-C6 cycloalkoxy, C1-C4 alkyl (alkyl being substituted with 1-5 groups selected independently from: $-NR^{13}R^{14}$, $-CF_3$, $NO_2$, $-SO_2R^{13a}$, or $-S(=O)R^{13a}$),

aryl substituted with 0-2 $R^{12}$,

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

$R^{12}$ is selected from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)-$OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl, C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino,

-OCH2CO2H, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with -N($R^{13}$)2, -CF3, NO2, or -S(=O)$R^{13a}$);

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form -(CH2)2-5- or -(CH2)O(CH2)-;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

$R^{21}$ and $R^{23}$ are independently selected from:

hydrogen;
C1-C4 alkyl, optionally substituted with 1-6 halogen;
benzyl;

$R^2$ is H or C1-C8 alkyl;

$R^{10}$ and $R^{10a}$ are selected independently from one or more of the following:
phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl,

C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)N(R^{13})_2$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)-$OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl (including $-C_vF_w$ where v = 1 to 3 and w = 1 to (2v+1)), C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

J is 3-aminopropionic acid or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or C1-C8 alkyl;

$R^4$ is H or C1-C3 alkyl;

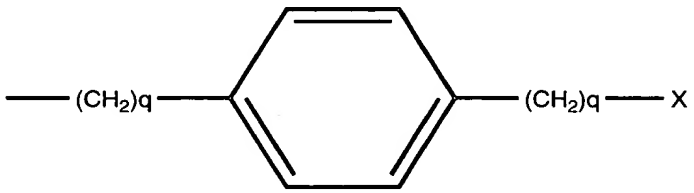
$R^5$ is selected from:
hydrogen;
C1-C8 alkyl substituted with 0-2 $R^{11}$;
C2-C8 alkenyl substituted with 0-2 $R^{11}$;
C2-C8 alkynyl substituted with 0-2 $R^{11}$;
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

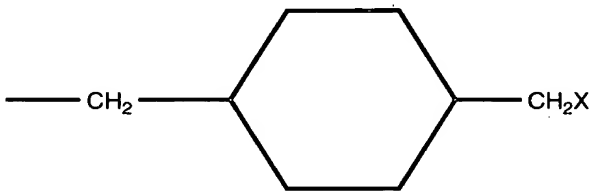
a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, or O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, $-SC(=NH)NHR^{13}$, $N_3$, $-Si(CH_3)_3$, (C1-C5 alkyl)$NHR^{16}$;

-(C0-C6 alkyl)X;




, where q is independently 0,1;

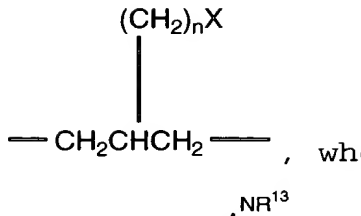



;

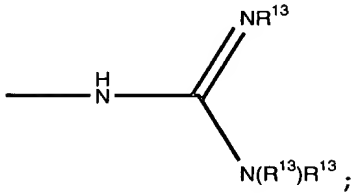
$-(CH_2)_mS(O)_{p'}(CH_2)_2X$, where m = 1,2 and p' = 0-2;

and

$R^3$ and $R^4$ may also be taken together to form




, where n = 0,1 and X is




;

$R^3$ and $R^5$ can alternatively be taken together to form -(CH2)t- or -CH2S(O)p'C(CH3)2-, where t = 2-4 and p' = 0-2; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

$R^{16}$ is selected from:

an amine protecting group;

1-2 amino acids;

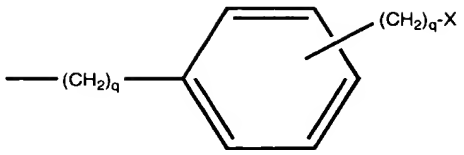
1-2 amino acids substituted with an amine protecting group;

K is a D-isomer or L-isomer amino acid of structure -($R^6$)CH($R^7$)C(=O)-, wherein:

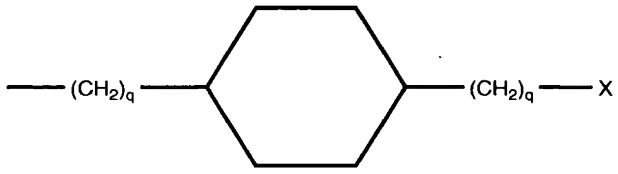
$R^6$ is H or C1-C8 alkyl;

$R^7$ is selected from:

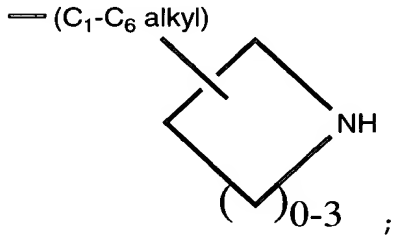
-(C1-C7 alkyl)X;




, wherein each q is independently 0-2 and substitution on the phenyl is at the 3 or 4 position;




, wherein each q is independently 0-2 and substitution on the cyclohexyl is at the 3 or 4 position;

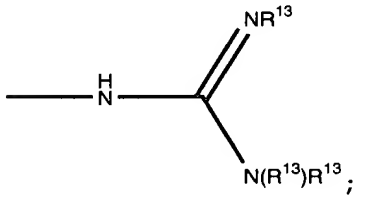



;

-(CH2)mO-(C1-C4 alkyl)-X, where m = 1 or 2;

-(CH2)mS(O)p'-(C1-C4 alkyl)-X, where m = 1 or 2 and p' = 0-2; and

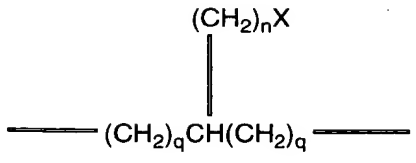
X is selected from:



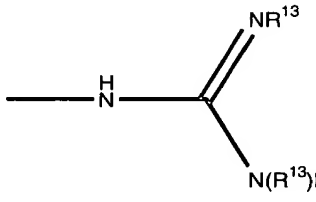

;

-N($R^{13}$)$R^{13}$; -C(=NH)(NH2); -SC(=NH)-NH2; -NH-C(=NH)(NHCN); -NH-C(=NCN)(NH2); -NH-C(=N-O$R^{13}$)(NH2);

$R^6$ and $R^7$ can alternatively be taken together to form



, wherein each q is independently 1 or 2 and wherein n = 0 or 1 and X is -NH2

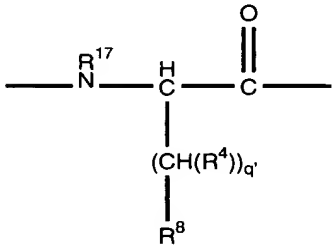


or

L is $-Y(CH_2)_vC(=O)-$, wherein:

Y is NH, N(C1-C3 alkyl), O, or S; and v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$,

$-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$;

$R^{34}$ and $R^{35}$ are independently selected from:

-OH,

-F,

$-N(R^{13})_2$, or

C1-C8-alkoxy;

$R^{34}$ and $R^{35}$ can alternatively be taken together form:

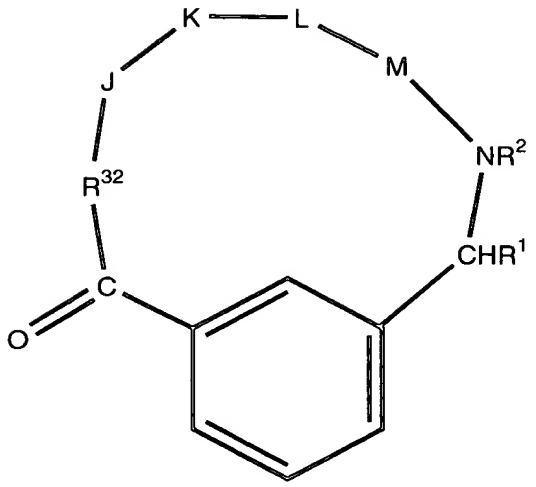
a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a divalent cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

9 2 Cont

a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O.

23. (New) The method of Claim 22 wherein the localization step comprises the step of localizing a compound of the formula (I) at the pulmonary embolus wherein Q is of the formula (III),




(III)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

the shown phenyl ring may be further substituted with 0-3 $R^{10}$;

$R^{10}$ is selected independently from: H, C1-C8 alkyl, phenyl, halogen, or C1-C4 alkoxy;

$R^{1}$ is H, C1-C4 alkyl, phenyl, benzyl, or phenyl-(C1-C4)alkyl;

$R^{2}$ is H or methyl;

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form -(CH2)2-5- or -(CH2)O(CH2)-;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

J is β-alanine or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or CH3;

$R^4$ is H or C1-C3 alkyl;

$R^5$ is H, C1-C8 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C1-C6 cycloalkylethyl, phenyl, phenylmethyl, CH2OH, CH2SH, CH2OCH3, CH2SCH3, CH2CH2SCH3, $(CH_2)_sNH_2$, $-(CH_2)_sNHC(=NH)(NH_2)$, $-(CH_2)_sNHR^{16}$, where s = 3-5; or

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$R^{16}$ is selected from:

an amine protecting group;

1-2 amino acids; or

1-2 amino acids substituted with an amine protecting group;

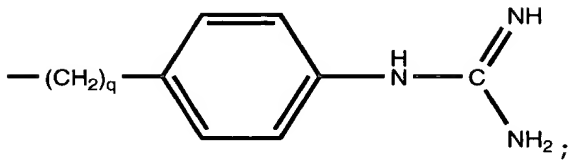
$R^3$ and $R^5$ can alternatively be taken together to form -CH2CH2CH2-; or

$R^4$ and $R^5$ can alternatively be taken together to form $-(CH_2)_u-$, where u = 2-5;

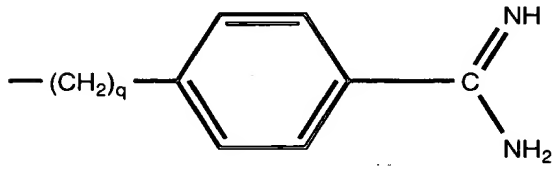
K is an L-isomer amino acid of structure $-N(R^6)CH(R^7)C(=O)-$, wherein:

$R^6$ is H or C1-C8 alkyl;

$R^7$ is:

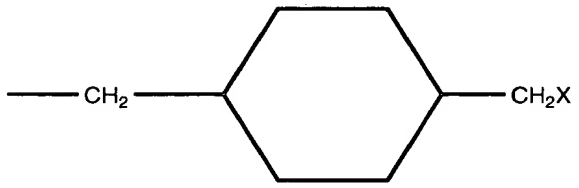



;




, where q = 0 or 1;

-(CH2)rX, where r = 3-6;

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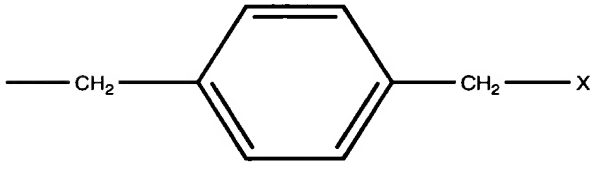
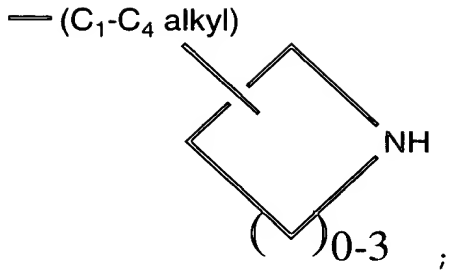



;

-(CH2)mS(CH2)2X, where m = 1 or 2;

-(C3-C7 alkyl)-NH-(C1-C6 alkyl);



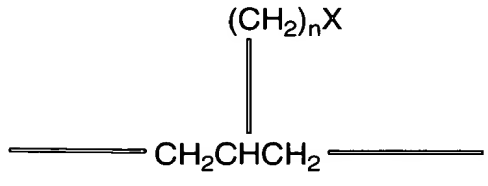

;

-(CH2)m-O-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2;

-(CH2)m-S-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2; and

X is -NH2 or -NHC(=NH)(NH2), provided that X is not -NH2 when r = 4; or

$R^6$ and R7 are alternatively be taken together to form



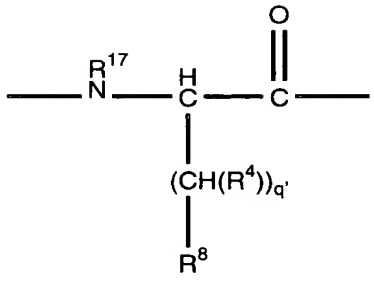

, where n = 0,1 and X is -NH2 or

-NHC(=NH)(NH2);

L is -Y(CH2)vC(=O)-, wherein:

Y is NH, O, or S; and v = 1,2;

M is a D-isomer or L-isomer amino acid of



structure , wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$.

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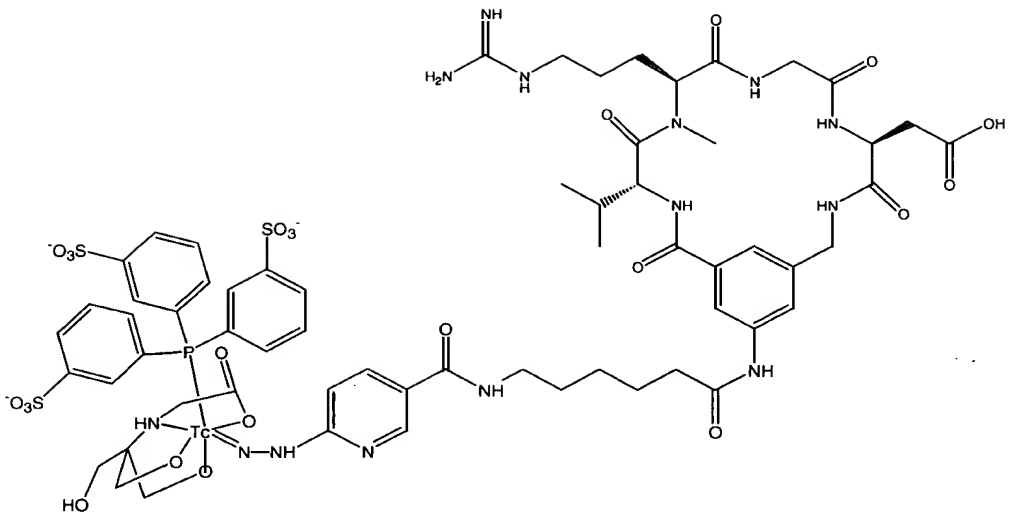
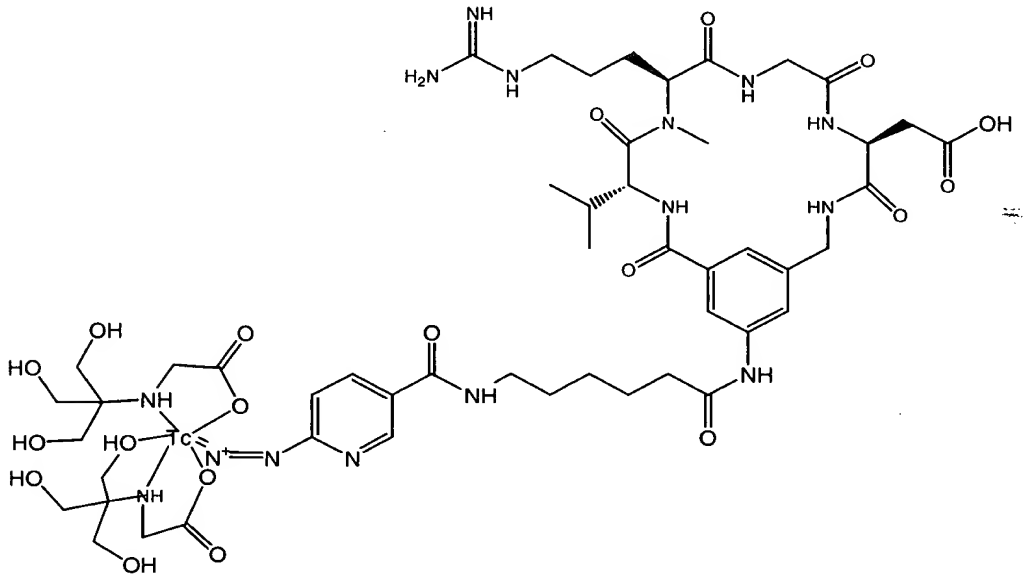
24. (New) The method of Claim 20 wherein the localization step comprises the step of localizing a compound of the formula (IV) at the pulmonary embolus:



(IV).

25. (New) The method of Claim 20 wherein the localization step comprises the step of localizing a compound of the formula (V) at the pulmonary embolus:



(V).

26. (New) The method of Claim 17 wherein the acquisition step comprises the step of acquiring image slices representing a concentration of radioactivity

associated with the pulmonary embolus.

27. (New) The method of Claim 26 wherein the acquisition step comprises the step of acquiring single photon emission computed tomography images of the pulmonary embolus.

28. (New) The method of Claim 17 wherein the acquisition step comprises the step of acquiring transaxial image slices and further comprising the step of reformatting the transaxial image slices into image slices that are parallel to a long axis associated with the pulmonary embolus.

29. (New) The method of Claim 17 comprising the step of displaying the two-dimensional array as a reprojected image.

30. (New) The method of Claim 17 wherein the scanning step is performed at a series of angles.

31. (New) The method of Claim 30 wherein the assignment step is performed at each of the series of angles.

32. (New) The method of Claim 31 comprising the step of sequentially displaying the two-dimensional arrays as reprojected images.

33. (New) The method of Claim 18 wherein the localization step comprises the step of localizing a compound of the formula (I), and pharmaceutically acceptable salts thereof, at the arterial thrombus:

$$|(Q)d'-L_n-C_{h'}|x-M_T(A_{L1})y(A_{L2})z$$

(I),

wherein,

Q is a glycoprotein IIb/IIIa binding compound;

d' is 1 - 20;

Ln is a linking group of formula:

$M^1-[Y^1(CR^{55}R^{56})f(Z^1)f"Y^2]f'-M^2$,

wherein:

$M^1$ is $-[(CH2)gZ^1]g'-(CR^{55}R^{56})g"-$;

$M^2$ is $-(CR^{55}R^{56})g"-[Z^1(CH2)g]g'-$;

g is independently 0-10;

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g' is independently 0-1;

g" is independently 0-10;

f is independently 0-10;

f' is independently 0-10;

f" is independently 0-1;

$Y^1$ and $Y^2$, are independently selected at each occurrence from: a bond, O, $NR^{56}$, C=O, C(=O)O, OC(=O)O, C(=O)NH-, $C=NR^{56}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), and (NH)2C=S;

$Z^1$ is independently selected at each occurrence from a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system, substituted with 0-4 $R^{57}$; and a heterocyclic ring system, substituted with 0-4 $R^{57}$;

$R^{55}$ and $R^{56}$ are independently selected at each occurrence from: hydrogen; C1-C10 alkyl substituted with 0-5 $R^{57}$; and alkaryl wherein the aryl is substituted with 0-5 $R^{57}$;

$R^{57}$ is independently selected at each occurrence from the group: hydrogen, OH, $NHR^{58}$, $C(=O)R^{58}$, $OC(=O)R^{58}$, $OC(=O)OR^{58}$, $C(=O)OR^{58}$, $C(=O)NR^{58}$, C≡N, $SR^{58}$, $SOR^{58}$, $SO2R^{58}$, $NHC(=O)R^{58}$, $NHC(=O)NHR^{58}$, $NHC(=S)NHR^{58}$; or, alternatively, when attached to an additional molecule Q, $R^{57}$ is independently selected at each occurrence from the group: O, $NR^{58}$, C=O, C(=O)O, OC(=O)O, C(=O)N-, $C=NR^{58}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), (NH)2C=S; and,

Q 9 Cont

$R^{58}$ is independently selected at each occurrence from the group: hydrogen; C1-C6 alkyl; benzyl, and phenyl;

$M_T$ is a transition metal radionuclide;

$C_{h'}$ is a radionuclide metal chelator or bonding unit bound to the transition metal radionuclide selected from the group consisting of: $R^{40}N=N^{+}=$, $R^{40}R^{41}N-N=$, $R^{40}N=$, or $R^{40}N=N(H)-$;

$R^{40}$ is independently selected at each occurrence from the group: a bond to Ln, C1-C10 alkyl substituted with 0-3 $R^{52}$, aryl substituted with 0-3 $R^{52}$, cycloaklyl substituted with 0-3 $R^{52}$, heterocycle substituted with 0-3 $R^{52}$, heterocycloalkyl substituted with 0-3 $R^{52}$, aralkyl substituted with 0-3 $R^{52}$ and alkaryl substituted with 0-3 $R^{52}$;

$R^{41}$ is independently selected from the group: hydrogen, aryl substituted with 0-3 $R^{52}$, C1-C10 alkyl substituted with 0-3 $R^{52}$, and a heterocycle substituted with 0-3 $R^{52}$;

$R^{52}$ is independently selected at each occurrence from the group: a bond to Ln, =O, F, Cl, Br, I, -CF3, -CN, $-CO_2R^{53}$, $-C(=O)R^{53}$, $-C(=O)N(R^{53})_2$, -CHO, $-CH_2OR^{53}$, $-OC(=O)R^{53}$, $-OC(=O)OR^{53a}$, $-OR^{53}$, $-OC(=O)N(R^{53})_2$, $-NR^{53}C(=O)R^{53}$, $-NR^{54}C(=O)OR^{53a}$, $-NR^{53}C(=O)N(R^{53})_2$, $-NR^{54}SO_2N(R^{53})_2$, $-NR^{54}SO_2R^{53a}$, $-SO_3H$, $-SO_2R^{53a}$, $-SR^{53}$, $-S(=O)R^{53a}$, $-SO_2N(R^{53})_2$, $-N(R^{53})_2$, $-NHC(=NH)NHR^{53}$, $-C(=NH)NHR^{53}$, $=NOR^{53}$, $NO_2$, $-C(=O)NHOR^{53}$, $-C(=O)NHNR^{53}R^{53a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

$R^{53}$, $R^{53a}$, and $R^{54}$ are each independently selected at each occurrence from the group: hydrogen, C1-C6 alkyl, and a bond to Ln;

$A_{L1}$ is a first ligand wherein each of the y first ligands are selected from the group consisting of: dioxygen ligands, functionalized aminocarboxylates, halides, and combinations thereof;

$A_{L2}$ is a second ligand wherein each of the z second ligands are selected from the group consisting of: trisubstituted phosphines, trisubstituted arsines, tetrasubstituted diphosphines, tetrasubstituted diarsines, and combinations thereof;

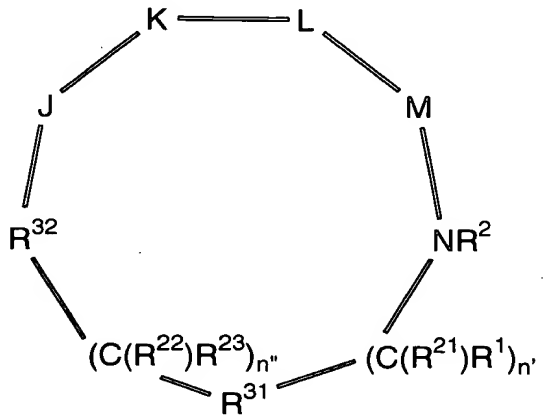
x is independently 1-2;

y is independently 1-2; and

z is independently 0-4.

34. (New) The method of Claim 33 wherein $M_T$ is selected from the group consisting of: technetium-99m, rhenium-186, and rhenium-188.

35. (New) The method of Claim 33 wherein the localization step comprises the step of localizing a compound of the formula (I) at the arterial thrombus wherein Q is of the formula (II),




(II)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

$R^{31}$ is a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system substituted with 0-4 $R^{10}$ or $R^{10a}$;

$R^{32}$ is selected from:
-C(=O)-;
-C(=S)-
-S(=O)2-;
-S(=O)-;
-P(=Z)($ZR^{13}$)-;

Z is S or O;

n" and n' are independently 0-2;

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$R^1$ and $R^{22}$ are independently selected from the following groups:

hydrogen,
C1-C8 alkyl substituted with 0-2 $R^{11}$;
C2-C8 alkenyl substituted with 0-2 $R^{11}$;
C2-C8 alkynyl substituted with 0-2 $R^{11}$;
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

$R^1$ and $R^{21}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n' is 2, $R^1$ or $R^{21}$ can alternatively be taken together with $R^1$ or $R^{21}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between said carbon atoms;

Cont

$R^{22}$ and $R^{23}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n" is 2, $R^{22}$ or $R^{23}$ can alternatively be taken together with $R^{22}$ or $R^{23}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between the adjacent carbon atoms;

$R^1$ and $R^2$, where $R^{21}$ is H, can alternatively join to form a 5-8 membered carbocyclic ring substituted with 0-2 $R^{12}$;

$R^{11}$ is selected from one or more of the following:

=O, F, Cl, Br, I, -CF3, -CN, -CO2$R^{13}$, -C(=O)$R^{13}$, -C(=O)N($R^{13}$)2, -CHO, -CH2O$R^{13}$, -OC(=O)$R^{13}$, -OC(=O)O$R^{13a}$, -O$R^{13}$, -OC(=O)N($R^{13}$)2, -N$R^{13}$C(=O)$R^{13}$, -N$R^{14}$C(=O)O$R^{13a}$, -N$R^{13}$C(=O)N($R^{13}$)2, -N$R^{14}$SO2N($R^{13}$)2, -N$R^{14}$SO2$R^{13a}$, -SO3H, -SO2$R^{13a}$, -S$R^{13}$, -S(=O)$R^{13a}$, -SO2N($R^{13}$)2, -N($R^{13}$)2, -NHC(=NH)NH$R^{13}$, -C(=NH)NH$R^{13}$, =NO$R^{13}$, NO2, -C(=O)NHO$R^{13}$, -C(=O)NHN$R^{13}$$R^{13a}$, -OCH2CO2H, 2-(1-morpholino)ethoxy,

C1-C5 alkyl, C2-C4 alkenyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C2-C6 alkoxyalkyl, C3-C6 cycloalkoxy, C1-C4 alkyl (alkyl being substituted with 1-5 groups selected independently from: -N$R^{13}$$R^{14}$, -CF3, NO2, -SO2$R^{13a}$, or -S(=O)$R^{13a}$),

aryl substituted with 0-2 $R^{12}$,

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

$R^{12}$ is selected from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, -CO2$R^{13}$, -C(=O)NHO$R^{13a}$, -C(=O)NHN($R^{13}$)2, =NO$R^{13}$, -B($R^{34}$)($R^{35}$), C3-C6 cycloalkoxy, -OC(=O)$R^{13}$, -C(=O)$R^{13}$,-OC(=O)O$R^{13a}$, -O$R^{13}$, -(C1-C4 alkyl)-O$R^{13}$, -N($R^{13}$)2, -OC(=O)N($R^{13}$)2,

$-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})2$, $-NR^{13}SO2N(R^{13})2$, $-NR^{13}SO2R^{13a}$, $-SO3H$, $-SO2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO2N(R^{13})2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl, C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, -OCH2CO2H, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})2$, $-CF3$, $NO2$, or $-S(=O)R^{13a}$);

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form -(CH2)2-5- or -(CH2)O(CH2)-;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

$R^{21}$ and $R^{23}$ are independently selected from:

hydrogen;
C1-C4 alkyl, optionally substituted with 1-6 halogen;
benzyl;

$R^2$ is H or C1-C8 alkyl;

$R^{10}$ and $R^{10a}$ are selected independently from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)N(R^{13})_2$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)$-OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl (including $-C_vF_w$ where v = 1 to 3 and w = 1 to (2v+1)), C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

J is 3-aminopropionic acid or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or C1-C8 alkyl;

$R^4$ is H or C1-C3 alkyl;

$R^5$ is selected from:
hydrogen;

C1-C8 alkyl substituted with 0-2 $R^{11}$;

C2-C8 alkenyl substituted with 0-2 $R^{11}$;

C2-C8 alkynyl substituted with 0-2 $R^{11}$;

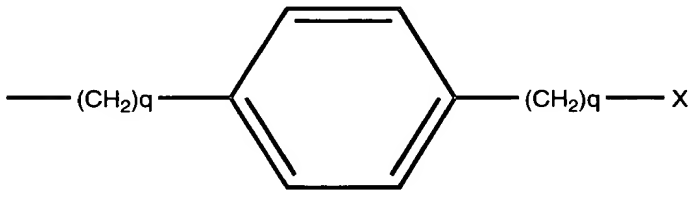
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

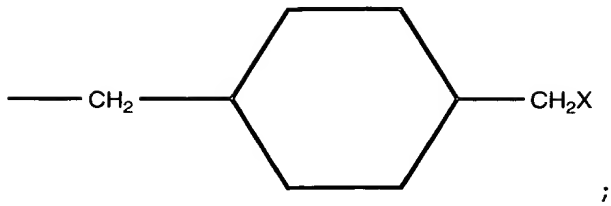
a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, or O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, $-SC(=NH)NHR^{13}$, $N_3$, $-Si(CH_3)_3$, (C1-C5 alkyl)$NHR^{16}$;

-(C0-C6 alkyl)X;




, where q is independently 0,1;

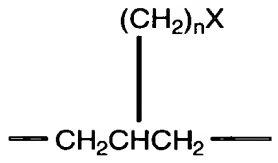



;

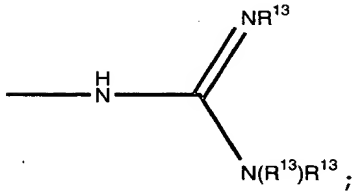
-(CH2)mS(O)p'(CH2)2X, where m = 1,2 and p' = 0-2;

and

$R^3$ and $R^4$ may also be taken together to form




, where n = 0,1 and X is




;

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$R^3$ and $R^5$ can alternatively be taken together to form -(CH2)t- or -CH2S(O)p'C(CH3)2-, where t = 2-4 and p' = 0-2; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

$R^{16}$ is selected from:

an amine protecting group;

1-2 amino acids;

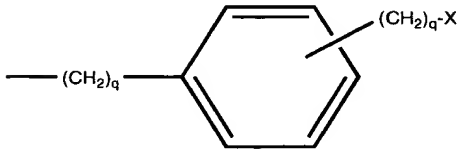
1-2 amino acids substituted with an amine protecting group;

K is a D-isomer or L-isomer amino acid of structure $-(R^6)CH(R^7)C(=O)-$, wherein:

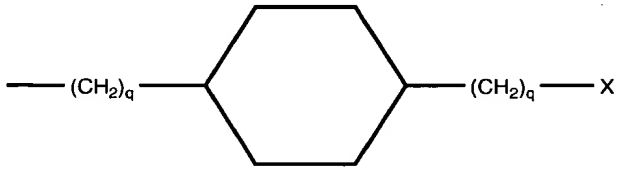
$R^6$ is H or C1-C8 alkyl;

$R^7$ is selected from:

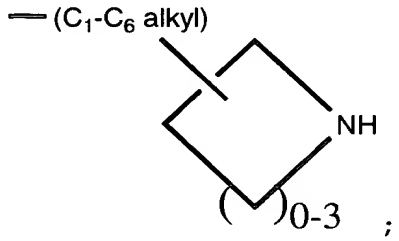
-(C1-C7 alkyl)X;




, wherein each q is independently 0-2 and substitution on the phenyl is at the 3 or 4 position;




, wherein each q is independently 0-2 and substitution on the cyclohexyl is at the 3 or 4 position;

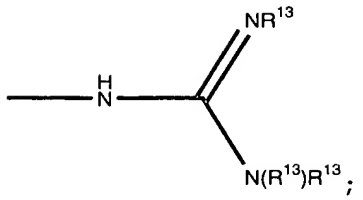



;

-(CH2)mO-(C1-C4 alkyl)-X, where m = 1 or 2;

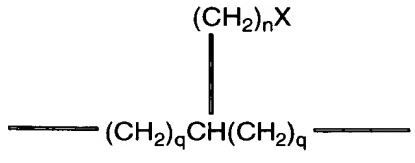
-(CH2)mS(O)p'-(C1-C4 alkyl)-X, where m = 1 or 2 and p' = 0-2; and

X is selected from:

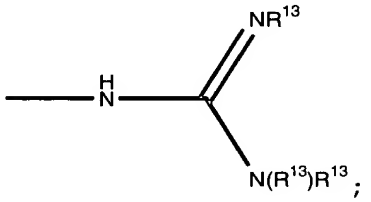


$-N(R^{13})R^{13}$; $-C(=NH)(NH_2)$; $-SC(=NH)-NH_2$;
$-NH-C(=NH)(NHCN)$; $-NH-C(=NCN)(NH_2)$; $-NH-C(=N-OR^{13})(NH_2)$;

$R^6$ and $R^7$ can alternatively be taken together to form



, wherein each q is independently 1 or 2 and wherein n = 0 or 1 and X is $-NH_2$

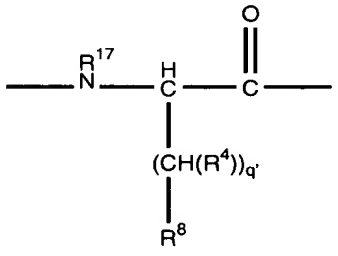


or

L is $-Y(CH_2)_vC(=O)-$, wherein:

Y is NH, N(C1-C3 alkyl), O, or S; and v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$;

$R^{34}$ and $R^{35}$ are independently selected from:

-OH,

-F,

$-N(R^{13})_2$, or

C1-C8-alkoxy;

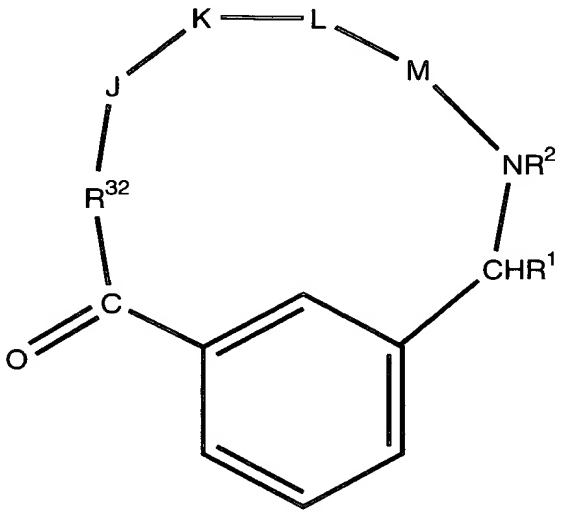
$R^{34}$ and $R^{35}$ can alternatively be taken together form:

a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a divalent cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O.

36. (New) The method of Claim 35 wherein the localization step comprises the step of localizing a compound of the formula (I) at the arterial thrombus wherein Q is of the formula (III),




(III)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

the shown phenyl ring may be further substituted with 0-3 $R^{10}$;

$R^{10}$ is selected independently from: H, C1-C8 alkyl, phenyl, halogen, or C1-C4 alkoxy;

$R^1$ is H, C1-C4 alkyl, phenyl, benzyl, or phenyl-(C1-C4)alkyl;

$R^2$ is H or methyl;

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form -(CH2)2-5- or -(CH2)O(CH2)-;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

J is β-alanine or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or CH3;

$R^4$ is H or C1-C3 alkyl;

$R^5$ is H, C1-C8 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C1-C6 cycloalkylethyl, phenyl, phenylmethyl, CH2OH, CH2SH, CH2OCH3, CH2SCH3, CH2CH2SCH3, $(CH_2)_sNH_2$, $-(CH_2)_sNHC(=NH)(NH_2)$, $-(CH_2)_sNHR^{16}$, where s = 3-5; or

$R^{16}$ is selected from:
an amine protecting group;
1-2 amino acids; or
1-2 amino acids substituted with an amine protecting group;

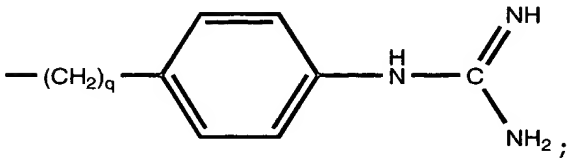
$R^3$ and $R^5$ can alternatively be taken together to form -CH2CH2CH2-; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

K is an L-isomer amino acid of structure $-N(R^6)CH(R^7)C(=O)-$, wherein:

$R^6$ is H or C1-C8 alkyl;

$R^7$ is:



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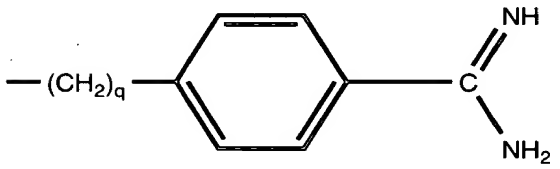

, where q = 0 or 1;

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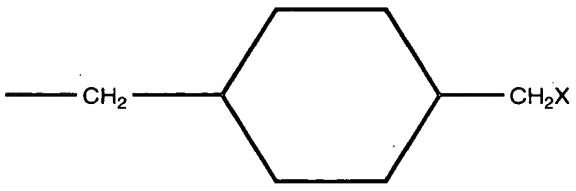
-(CH2)rX, where r = 3-6;



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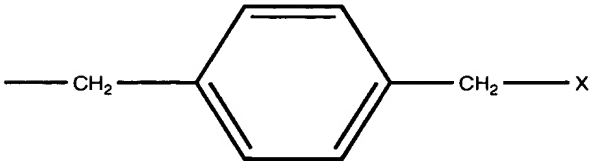
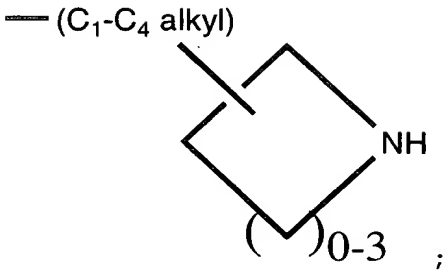


;

-(CH2)mS(CH2)2X, where m = 1 or 2;

-(C3-C7 alkyl)-NH-(C1-C6 alkyl);



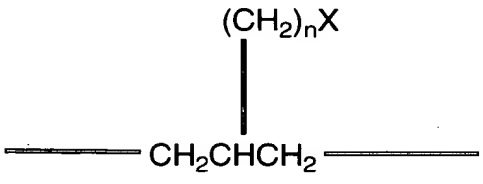

;

-(CH2)m-O-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2;

-(CH2)m-S-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2; and

X is -NH2 or -NHC(=NH)(NH2), provided that X is not -NH2 when r = 4; or

$R^6$ and R7 are alternatively be taken together to form



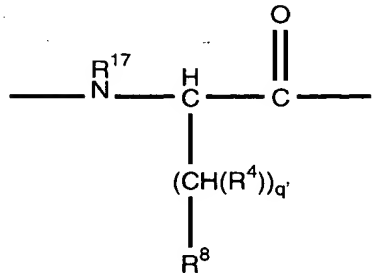

, where n = 0,1 and X is -NH2 or

-NHC(=NH)(NH2);

L is -Y(CH2)vC(=O)-, wherein:

Y is NH, O, or S; and v = 1,2;

M is a D-isomer or L-isomer amino acid of



structure , wherein:

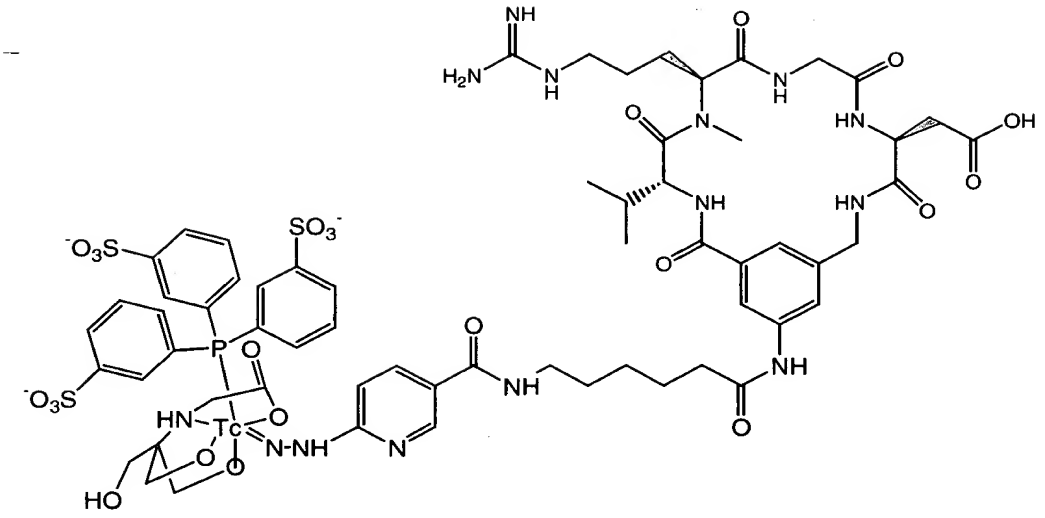
q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

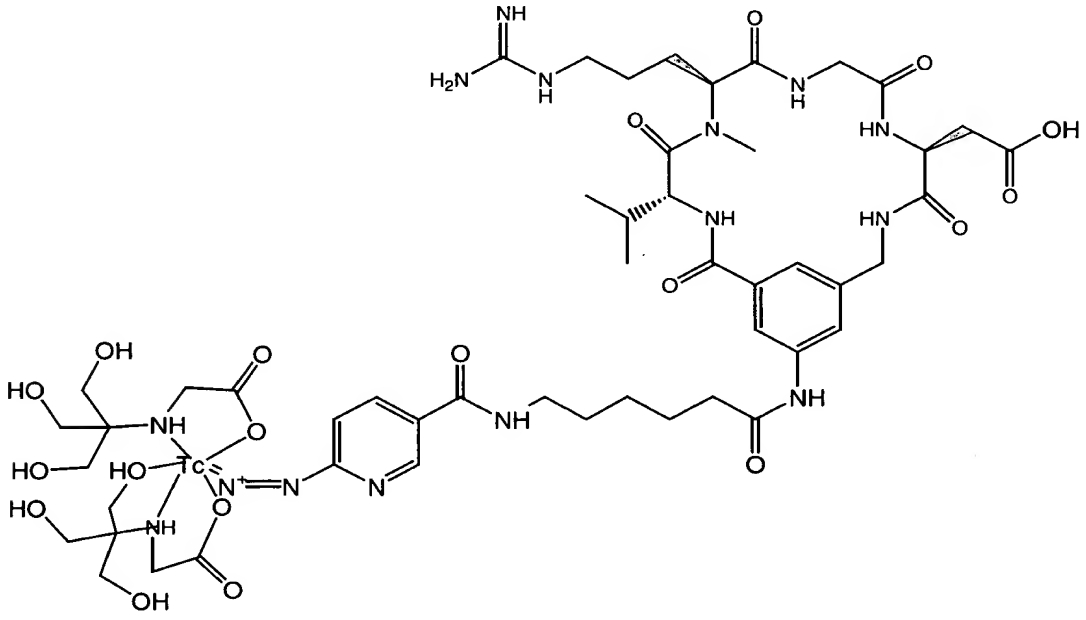
$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$.

37. (New) The method of Claim 33 wherein the localization step comprises the step of localizing a compound of the formula (IV) at the arterial thrombus:



(IV).

38. (New) The method of Claim 33 wherein the localization step comprises the step of localizing a compound of the formula (V) at the arterial thrombus:



(V).

39. (New) The method of Claim 18 wherein the acquisition step comprises the step of acquiring image

slices representing a concentration of radioactivity associated with the arterial thrombus.

40. (New) The method of Claim 39 wherein the acquisition step comprises the step of acquiring single photon emission computed tomography images of the arterial thrombus.

41. (New) The method of Claim 18 wherein the acquisition step comprises the step of acquiring transaxial image slices and further comprising the step of reformatting the transaxial image slices into image slices that are parallel to a long axis associated with the arterial thrombus.

42. (New) The method of Claim 18 comprising the step of displaying the two-dimensional array as a reprojected image.

43. (New) The method of Claim 18 wherein the scanning step is performed at a series of angles.

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Cont

44. (New) The method of Claim 43 wherein the assignment step is performed at each of the series of angles.

45. (New) The method of Claim 44 comprising the step of sequentially displaying the two-dimensional arrays as reprojected images.

46. (New) The method of Claim 19 wherein the localization step comprises the step of localizing a compound of the formula (I), and pharmaceutically acceptable salts thereof, at the coronary thrombus:

$$|(Q)d'-L_n-C_h.|_x-M_T(A_{L1})_y(A_{L2})_z$$

(I),

wherein,

Q is a glycoprotein IIb/IIIa binding compound;

d' is 1 - 20;

Ln is a linking group of formula:

$M^1-[Y^1(CR^{55}R^{56})_f(Z^1)_{f"}Y^2]_{f'}-M^2$,

wherein:

$M^1$ is $-[(CH_2)_gZ^1]_{g'}-(CR^{55}R^{56})_{g"}-$;

$M^2$ is $-(CR^{55}R^{56})_{g"}-[Z^1(CH_2)_g]_{g'}-$;

g is independently 0-10;

g' is independently 0-1;

g" is independently 0-10;

f is independently 0-10;

f' is independently 0-10;

f" is independently 0-1;

$Y^1$ and $Y^2$, are independently selected at each occurrence from: a bond, O, $NR^{56}$, C=O, C(=O)O, OC(=O)O, C(=O)NH-, $C=NR^{56}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), and (NH)2C=S;

$Z^1$ is independently selected at each occurrence from a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system, substituted with 0-4 $R^{57}$; and a heterocyclic ring system, substituted with 0-4 $R^{57}$;

$R^{55}$ and $R^{56}$ are independently selected at each occurrence from: hydrogen; C1-C10 alkyl substituted with 0-5 $R^{57}$; and alkaryl wherein the aryl is substituted with 0-5 $R^{57}$;

$R^{57}$ is independently selected at each occurrence from the group: hydrogen, OH, $NHR^{58}$, $C(=O)R^{58}$, $OC(=O)R^{58}$, $OC(=O)OR^{58}$, $C(=O)OR^{58}$, $C(=O)NR^{58}$, C≡N, $SR^{58}$, $SOR^{58}$, $SO2R^{58}$, $NHC(=O)R^{58}$, $NHC(=O)NHR^{58}$, $NHC(=S)NHR^{58}$; or, alternatively, when attached to an additional molecule Q, $R^{57}$ is independently selected at each occurrence from the group: O, $NR^{58}$, C=O, C(=O)O, OC(=O)O, C(=O)N-, $C=NR^{58}$, S, SO, SO2, SO3, NHC(=O), (NH)2C(=O), (NH)2C=S; and,

$R^{58}$ is independently selected at each occurrence from the group: hydrogen; C1-C6 alkyl; benzyl, and phenyl;

$M_T$ is a transition metal radionuclide;

$C_h$, is a radionuclide metal chelator or bonding unit bound to the transition metal radionuclide selected from the group consisting of: $R^{40}N=N^+=$, $R^{40}R^{41}N-N=$, $R^{40}N=$, or $R^{40}N=N(H)-$;

$R^{40}$ is independently selected at each occurrence from the group: a bond to Ln, C1-C10 alkyl substituted with 0-3 $R^{52}$, aryl substituted with 0-3 $R^{52}$, cycloaklyl substituted with 0-3 $R^{52}$, heterocycle substituted with 0-3 $R^{52}$, heterocycloalkyl substituted with 0-3 $R^{52}$, aralkyl substituted with 0-3 $R^{52}$ and alkaryl substituted with 0-3 $R^{52}$;

$R^{41}$ is independently selected from the group: hydrogen, aryl substituted with 0-3 $R^{52}$, C1-C10 alkyl substituted with 0-3 $R^{52}$, and a heterocycle substituted with 0-3 $R^{52}$;

$R^{52}$ is independently selected at each occurrence from the group: a bond to Ln, =O, F, Cl, Br, I, -CF3, -CN, $-CO_2R^{53}$, $-C(=O)R^{53}$, $-C(=O)N(R^{53})_2$, -CHO, $-CH_2OR^{53}$, $-OC(=O)R^{53}$, $-OC(=O)OR^{53a}$, $-OR^{53}$, $-OC(=O)N(R^{53})_2$, $-NR^{53}C(=O)R^{53}$, $-NR^{54}C(=O)OR^{53a}$, $-NR^{53}C(=O)N(R^{53})_2$, $-NR^{54}SO_2N(R^{53})_2$, $-NR^{54}SO_2R^{53a}$, $-SO_3H$, $-SO_2R^{53a}$, $-SR^{53}$, $-S(=O)R^{53a}$, $-SO_2N(R^{53})_2$, $-N(R^{53})_2$, $-NHC(=NH)NHR^{53}$, $-C(=NH)NHR^{53}$, $=NOR^{53}$, $NO_2$, $-C(=O)NHOR^{53}$, $-C(=O)NHNR^{53}R^{53a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

Q2 Cont

$R^{53}$, $R^{53a}$, and $R^{54}$ are each independently selected at each occurrence from the group: hydrogen, C1-C6 alkyl, and a bond to Ln;

$A_{L1}$ is a first ligand wherein each of the y first ligands are selected from the group consisting of: dioxygen ligands, functionalized aminocarboxylates, halides, and combinations thereof;

$A_{L2}$ is a second ligand wherein each of the z second ligands are selected from the group consisting of: trisubstituted phosphines, trisubstituted arsines, tetrasubstituted diphosphines, tetrasubstituted diarsines, and combinations thereof;

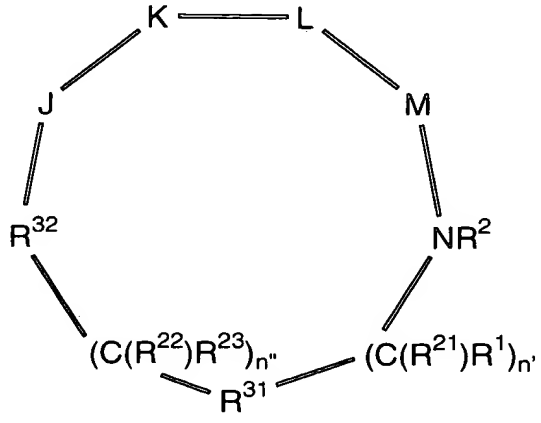
x is independently 1-2;

y is independently 1-2; and

z is independently 0-4.

47. (New) The method of Claim 46 wherein $M_T$ is selected from the group consisting of: technetium-99m, rhenium-186, and rhenium-188.

48. (New) The method of Claim 46 wherein the localization step comprises the step of localizing a compound of the formula (I) at the coronary thrombus wherein Q is of the formula (II),




(II)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

$R^{31}$ is a C6-C14 saturated, partially saturated, or aromatic carbocyclic ring system substituted with 0-4 $R^{10}$ or $R^{10a}$;

$R^{32}$ is selected from:

-C(=O)-;

-C(=S)-

-S(=O)2-;

-S(=O)-;

-P(=Z)(ZR$^{13}$)-;

Z is S or O;

n" and n' are independently 0-2;

$R^1$ and $R^{22}$ are independently selected from the following groups:

hydrogen,

C1-C8 alkyl substituted with 0-2 $R^{11}$;

C2-C8 alkenyl substituted with 0-2 $R^{11}$;

C2-C8 alkynyl substituted with 0-2 $R^{11}$;

C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy;

$R^1$ and $R^{21}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n' is 2, $R^1$ or $R^{21}$ can alternatively be taken together with $R^1$ or $R^{21}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between said carbon atoms;

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$R^{22}$ and $R^{23}$ can alternatively join to form a 3-7 membered carbocyclic ring substituted with 0-2 $R^{12}$;

when n" is 2, $R^{22}$ or $R^{23}$ can alternatively be taken together with $R^{22}$ or $R^{23}$ on an adjacent carbon atom to form a direct bond, thereby to form a double or triple bond between the adjacent carbon atoms;

$R^1$ and $R^2$, where $R^{21}$ is H, can alternatively join to form a 5-8 membered carbocyclic ring substituted with 0-2 $R^{12}$;

$R^{11}$ is selected from one or more of the following:

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy,

C1-C5 alkyl, C2-C4 alkenyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C2-C6 alkoxyalkyl, C3-C6 cycloalkoxy, C1-C4 alkyl (alkyl being substituted with 1-5 groups selected independently from: $-NR^{13}R^{14}$, $-CF_3$, $NO_2$, $-SO_2R^{13a}$, or $-S(=O)R^{13a}$),

aryl substituted with 0-2 $R^{12}$,

a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, and O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

$R^{12}$ is selected from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)-$OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$,

$-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl, C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

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when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form $-(CH_2)_{2-5}-$ or $-(CH_2)O(CH_2)-$;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

$R^{21}$ and $R^{23}$ are independently selected from:

hydrogen;

C1-C4 alkyl, optionally substituted with 1-6 halogen;

benzyl;

$R^2$ is H or C1-C8 alkyl;

$R^{10}$ and $R^{10a}$ are selected independently from one or more of the following:

phenyl, benzyl, phenethyl, phenoxy, benzyloxy, halogen, hydroxy, nitro, cyano, C1-C5 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C7-C10 arylalkyl, C1-C5 alkoxy, $-CO_2R^{13}$, $-C(=O)N(R^{13})_2$, $-C(=O)NHOR^{13a}$, $-C(=O)NHN(R^{13})_2$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, C3-C6 cycloalkoxy, $-OC(=O)R^{13}$, $-C(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, -(C1-C4 alkyl)$-OR^{13}$, $-N(R^{13})_2$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{13}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{13}SO_2N(R^{13})_2$, $-NR^{13}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-S(=O)R^{13a}$, $-SR^{13}$, $-SO_2N(R^{13})_2$, C2-C6 alkoxyalkyl, methylenedioxy, ethylenedioxy, C1-C4 haloalkyl (including $-C_vF_w$ where v = 1 to 3 and w = 1 to (2v+1)), C1-C4 haloalkoxy, C1-C4 alkylcarbonyloxy, C1-C4 alkylcarbonyl, C1-C4 alkylcarbonylamino, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, C1-C4 alkyl (alkyl being substituted with $-N(R^{13})_2$, $-CF_3$, $NO_2$, or $-S(=O)R^{13a}$);

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J is 3-aminopropionic acid or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or C1-C8 alkyl;

$R^4$ is H or C1-C3 alkyl;

$R^5$ is selected from:

hydrogen;

C1-C8 alkyl substituted with 0-2 $R^{11}$;

C2-C8 alkenyl substituted with 0-2 $R^{11}$;

C2-C8 alkynyl substituted with 0-2 $R^{11}$;

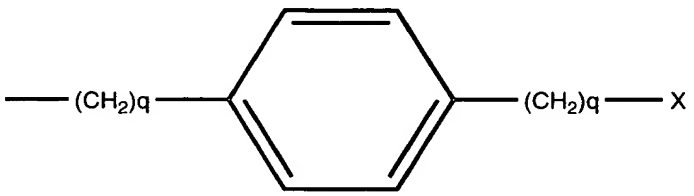
C3-C10 cycloalkyl substituted with 0-2 $R^{11}$;

aryl substituted with 0-2 $R^{12}$;

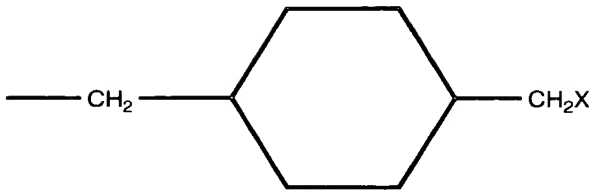
a 5-10-membered heterocyclic ring system containing 1-4 heteroatoms independently selected from N, S, or O, said heterocyclic ring being substituted with 0-2 $R^{12}$;

=O, F, Cl, Br, I, $-CF_3$, -CN, $-CO_2R^{13}$, $-C(=O)R^{13}$, $-C(=O)N(R^{13})_2$, -CHO, $-CH_2OR^{13}$, $-OC(=O)R^{13}$, $-OC(=O)OR^{13a}$, $-OR^{13}$, $-OC(=O)N(R^{13})_2$, $-NR^{13}C(=O)R^{13}$, $-NR^{14}C(=O)OR^{13a}$, $-NR^{13}C(=O)N(R^{13})_2$, $-NR^{14}SO_2N(R^{13})_2$, $-NR^{14}SO_2R^{13a}$, $-SO_3H$, $-SO_2R^{13a}$, $-SR^{13}$, $-S(=O)R^{13a}$, $-SO_2N(R^{13})_2$, $-N(R^{13})_2$, $-NHC(=NH)NHR^{13}$, $-C(=NH)NHR^{13}$, $=NOR^{13}$, $NO_2$, $-C(=O)NHOR^{13}$, $-C(=O)NHNR^{13}R^{13a}$, $=NOR^{13}$, $-B(R^{34})(R^{35})$, $-OCH_2CO_2H$, 2-(1-morpholino)ethoxy, $-SC(=NH)NHR^{13}$, $N_3$, $-Si(CH_3)_3$, (C1-C5 alkyl)$NHR^{16}$;

-(C0-C6 alkyl)X;




, where q is independently 0,1;

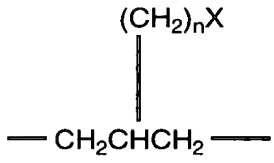



;

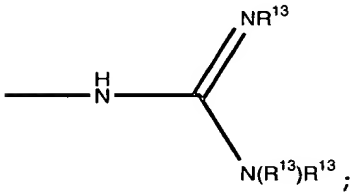
-(CH2)mS(O)p'(CH2)2X, where m = 1,2 and p' = 0-2;

and

$R^3$ and $R^4$ may also be taken together to form




, where n = 0,1 and X is

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Sn2

$R^3$ and $R^5$ can alternatively be taken together to form -(CH2)t- or -CH2S(O)p'C(CH3)2-, where t = 2-4 and p' = 0-2; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

$R^{16}$ is selected from:

an amine protecting group;

1-2 amino acids;

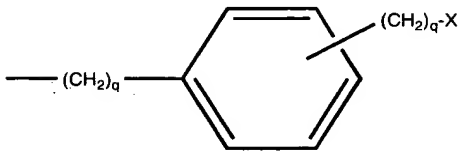
1-2 amino acids substituted with an amine protecting group;

K is a D-isomer or L-isomer amino acid of structure $-(R^6)CH(R^7)C(=O)-$, wherein:

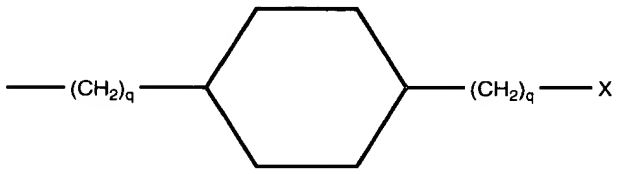
$R^6$ is H or C1-C8 alkyl;

$R^7$ is selected from:

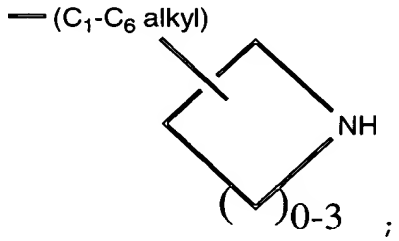
-(C1-C7 alkyl)X;




, wherein each q is independently 0-2 and substitution on the phenyl is at the 3 or 4 position;




, wherein each q is independently 0-2 and substitution on the cyclohexyl is at the 3 or 4 position;

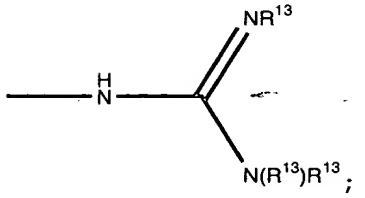



;

-(CH2)mO-(C1-C4 alkyl)-X, where m = 1 or 2;

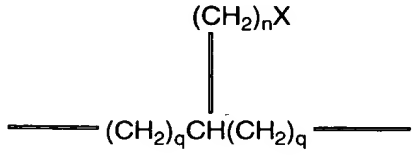
-(CH2)mS(O)p'-(C1-C4 alkyl)-X, where m = 1 or 2 and p' = 0-2; and

X is selected from:

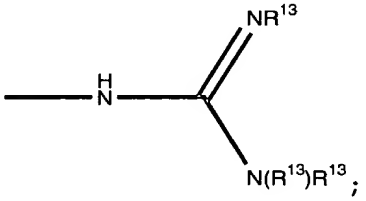


$-N(R^{13})R^{13}$; $-C(=NH)(NH_2)$; $-SC(=NH)-NH_2$;
$-NH-C(=NH)(NHCN)$; $-NH-C(=NCN)(NH_2)$; $-NH-C(=N-OR^{13})(NH_2)$;

$R^6$ and $R^7$ can alternatively be taken together to form



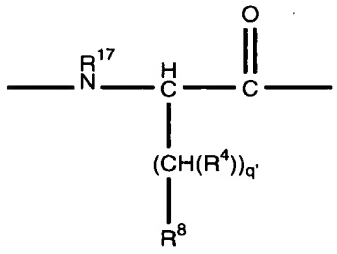
, wherein each q is independently 1 or 2 and wherein n = 0 or 1 and X is $-NH_2$

or 

L is $-Y(CH2)_vC(=O)-$, wherein:

Y is NH, N(C1-C3 alkyl), O, or S; and v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$;

$R^{34}$ and $R^{35}$ are independently selected from:

-OH,

-F,

$-N(R^{13})_2$, or

C1-C8-alkoxy;

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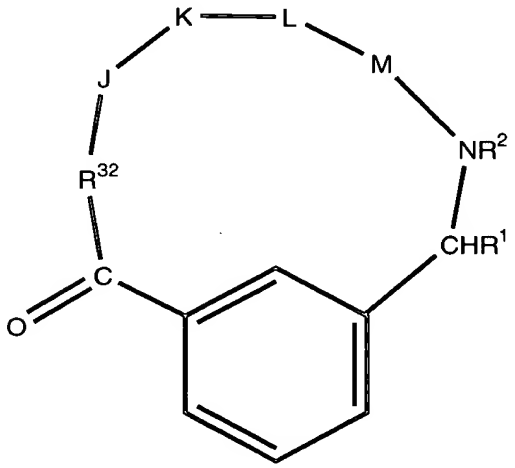
$R^{34}$ and $R^{35}$ can alternatively be taken together form:

a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a divalent cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O;

a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, optionally, 1-4 heteroatoms independently selected from N, S, or O.

49. (New) The method of Claim 46 wherein the localization step comprises the step of localizing a compound of the formula (I) at the coronary thrombus wherein Q is of the formula (III),




(III)

or a pharmaceutically acceptable salt or prodrug form thereof wherein:

the shown phenyl ring may be further substituted with 0-3 $R^{10}$;

92 Cont

$R^{10}$ is selected independently from: H, C1-C8 alkyl, phenyl, halogen, or C1-C4 alkoxy;

$R^1$ is H, C1-C4 alkyl, phenyl, benzyl, or phenyl-(C1-C4)alkyl;

$R^2$ is H or methyl;

$R^{13}$ is selected independently from: H, C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

$R^{13a}$ is C1-C10 alkyl, C3-C10 cycloalkyl, C4-C12 alkylcycloalkyl, aryl, -(C1-C10 alkyl)aryl, or C3-C10 alkoxyalkyl;

when two $R^{13}$ groups are bonded to a single N, said $R^{13}$ groups may alternatively be taken together to form -(CH2)2-5- or -(CH2)O(CH2)-;

$R^{14}$ is OH, H, C1-C4 alkyl, or benzyl;

J is β-alanine or an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H or CH3;

$R^4$ is H or C1-C3 alkyl;

$R^5$ is H, C1-C8 alkyl, C3-C6 cycloalkyl, C3-C6 cycloalkylmethyl, C1-C6 cycloalkylethyl, phenyl, phenylmethyl, CH2OH, CH2SH, CH2OCH3, CH2SCH3, CH2CH2SCH3, $(CH2)_sNH2$, $-(CH2)_sNHC(=NH)(NH2)$, $-(CH2)_sNHR^{16}$, where s = 3-5; or

$R^{16}$ is selected from:
an amine protecting group;
1-2 amino acids; or
1-2 amino acids substituted with an amine protecting group;

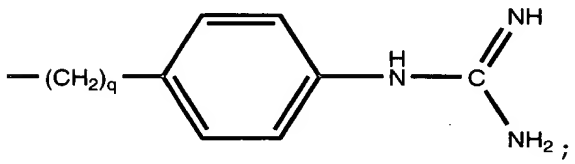
$R^3$ and $R^5$ can alternatively be taken together to form -CH2CH2CH2-; or

$R^4$ and $R^5$ can alternatively be taken together to form -(CH2)u-, where u = 2-5;

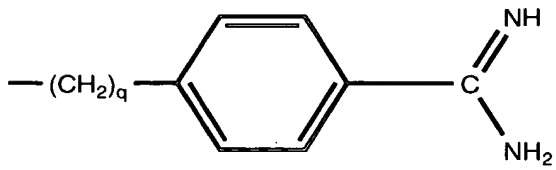
K is an L-isomer amino acid of structure $-N(R^6)CH(R^7)C(=O)-$, wherein:

$R^6$ is H or C1-C8 alkyl;

$R^7$ is:

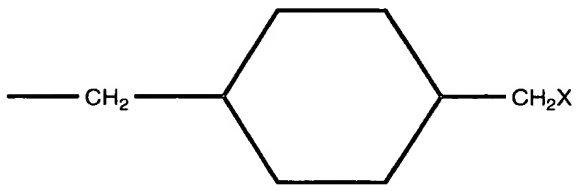


;

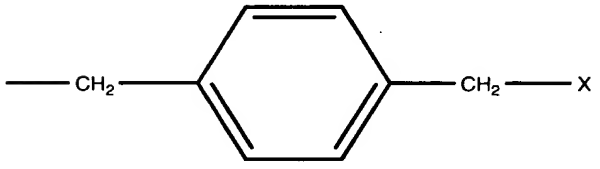


, where q = 0 or 1;

-(CH2)rX, where r = 3-6;



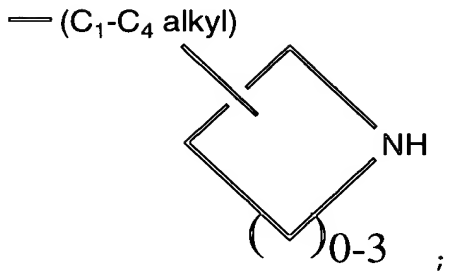
;



;

-(CH2)mS(CH2)2X, where m = 1 or 2;

-(C3-C7 alkyl)-NH-(C1-C6 alkyl);



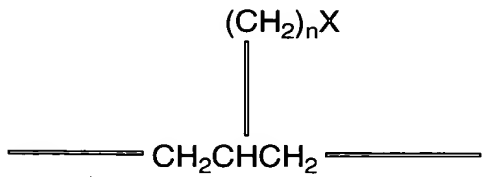

;

-(CH2)m-O-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2;

-(CH2)m-S-(C1-C4 alkyl)-NH-(C1-C6 alkyl), where m = 1 or 2; and

X is -NH2 or -NHC(=NH)(NH2), provided that X is not -NH2 when r = 4; or

R6 and R7 are alternatively be taken together to form



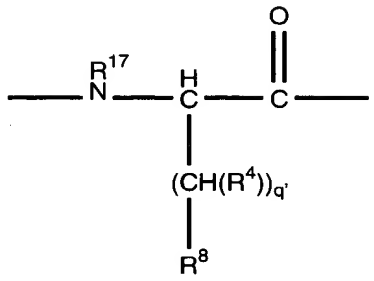

, where n = 0,1 and X is -NH2 or

-NHC(=NH)(NH2);

L is -Y(CH2)vC(=O)-, wherein:

Y is NH, O, or S; and v = 1,2;

M is a D-isomer or L-isomer amino acid of



structure , wherein:

q' is 0-2;

$R^{17}$ is H, C1-C3 alkyl;

$R^8$ is selected from:

$-CO_2R^{13}$, $-SO_3R^{13}$, $-SO_2NHR^{14}$, $-B(R^{34})(R^{35})$, $-NHSO_2CF_3$, $-CONHNHSO_2CF_3$, $-PO(OR^{13})_2$, $-PO(OR^{13})R^{13}$, -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O) , -SO2NH-heteroaryl (said heteroaryl being 5-10-membered and having 1-4 heteroatoms selected independently from N, S, or O), $-SO_2NHCOR^{13}$, $-CONHSO_2R^{13a}$, $-CH_2CONHSO_2R^{13a}$, $-NHSO_2NHCOR^{13a}$, $-NHCONHSO_2R^{13a}$, $-SO_2NHCONHR^{13}$.

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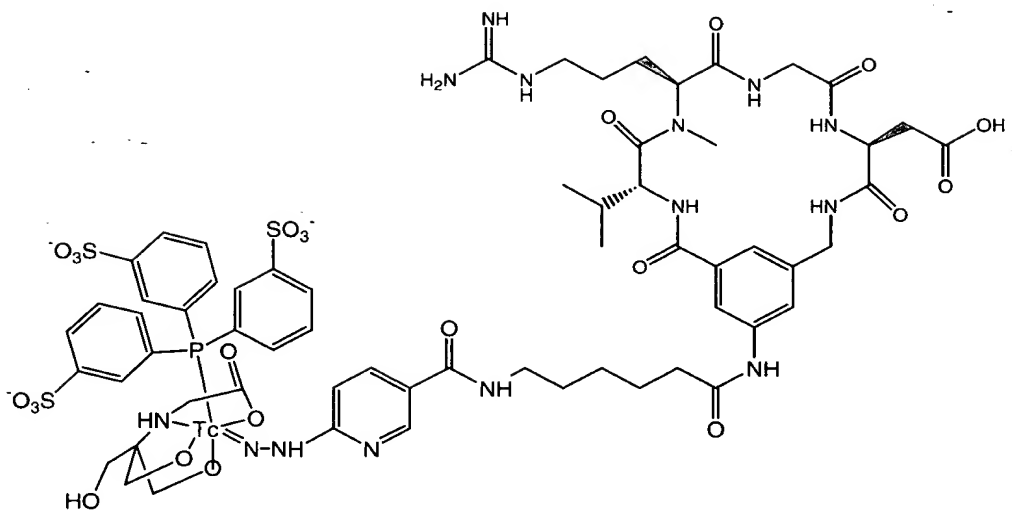
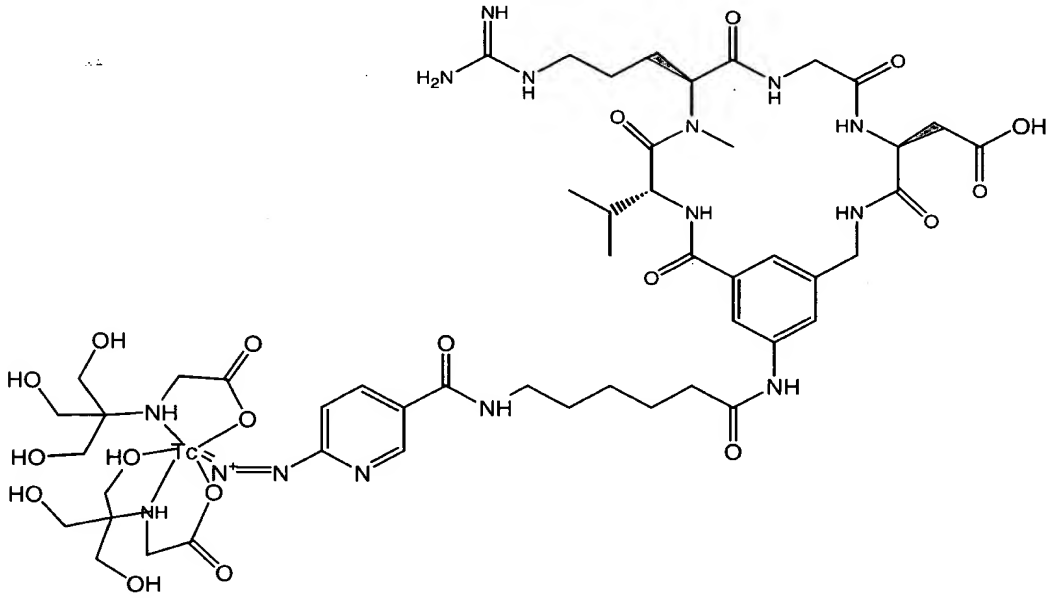
50. (New) The method of Claim 46 wherein the localization step comprises the step of localizing a compound of the formula (IV) at the coronary thrombus:



(IV).

51. (New) The method of Claim 46 wherein the localization step comprises the step of localizing a compound of the formula (V) at the coronary thrombus:



(V).

52. (New) The method of Claim 19 wherein the acquisition step comprises the step of acquiring image

slices representing a concentration of radioactivity associated with the coronary thrombus.

53. (New) The method of Claim 52 wherein the acquisition step comprises the step of acquiring single photon emission computed tomography images of the coronary thrombus.

54. (New) The method of Claim 19 wherein the acquisition step comprises the step of acquiring transaxial image slices and further comprising the step of reformatting the transaxial image slices into image slices that are parallel to a long axis associated with the coronary thrombus.

55. (New) The method of Claim 20 comprising the step of displaying the two-dimensional array as a reprojected image.

56. (New) The method of Claim 20 wherein the scanning step is performed at a series of angles.

57. (New) The method of Claim 56 wherein the assignment step is performed at each of the series of angles.

58. (New) The method of Claim 57 comprising the step of sequentially displaying the two-dimensional arrays as reprojected images.

**REMARKS**

This is in response to the election of species under 35 U.S.C. § 121 dated June 20, 2001. The marked-up version of amended claims is found in Appendix I attached to this amendment and titled "Marked-Up Version of

Rewritten Claims". The amendments are shown by text stricken through to indicate deletions and underlined text to indicate insertions.

Claims 1-19 are pending and subject to a restriction requirement.

Claim 6 is amended.

Claims 20-53 are added.

Claim 6 is amended to particularly point out and distinctly claim subject matter which Applicants regard as their invention. In particular, claim 1 is amended to correct an obvious typogarphical error. Support for this amendment is found throughout the specification, for example, in the specification at page 16, lines 32-33. Accordingly, no new matter is added.

Claim 20 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 4. Accordingly, no new matter is added.

Claim 21 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 5. Accordingly, no new matter is added.

Claim 22 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 6. Accordingly, no new matter is added.

Claim 23 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 7. Accordingly, no new matter is added.

Claim 24 is added to particularly point out and distinctly claim that which Applicants regard as their

invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 8. Accordingly, no new matter is added.

Claim 25 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 9. Accordingly, no new matter is added.

Claim 26 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 10. Accordingly, no new matter is added.

Claim 27 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 11. Accordingly, no new matter is added.

Claim 28 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 12. Accordingly, no new matter is added.

Claim 29 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 13. Accordingly, no new matter is added.

Claim 30 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 14. Accordingly, no new matter is added.

Claim 31 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout

the application, for example, in original claim 17 and original claim 15. Accordingly, no new matter is added.

Claim 32 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 17 and original claim 16. Accordingly, no new matter is added.

Claim 33 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 4. Accordingly, no new matter is added.

Claim 34 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 5. Accordingly, no new matter is added.

Claim 35 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 6. Accordingly, no new matter is added.

Claim 36 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 7. Accordingly, no new matter is added.

Claim 37 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 8. Accordingly, no new matter is added.

Claim 38 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 9. Accordingly, no new matter is added.

Claim 39 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 10. Accordingly, no new matter is added.

Claim 40 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 11. Accordingly, no new matter is added.

Claim 41 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 12. Accordingly, no new matter is added.

Claim 42 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 13. Accordingly, no new matter is added.

Claim 43 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 14. Accordingly, no new matter is added.

Claim 44 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 15. Accordingly, no new matter is added.

Claim 45 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 18 and original claim 16. Accordingly, no new matter is added.

Claim 46 is added to particularly point out and distinctly claim that which Applicants regard as their

invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 4. Accordingly, no new matter is added.

Claim 47 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 5. Accordingly, no new matter is added.

Claim 48 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 6. Accordingly, no new matter is added.

Claim 49 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 7. Accordingly, no new matter is added.

Claim 50 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 8. Accordingly, no new matter is added.

Claim 51 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 9. Accordingly, no new matter is added.

Claim 52 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 10. Accordingly, no new matter is added.

Claim 53 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout

the application, for example, in original claim 19 and original claim 11. Accordingly, no new matter is added.

Claim 54 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 12. Accordingly, no new matter is added.

Claim 55 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 13. Accordingly, no new matter is added.

Claim 56 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 14. Accordingly, no new matter is added.

Claim 57 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 15. Accordingly, no new matter is added.

Claim 58 is added to particularly point out and distinctly claim that which Applicants regard as their invention. Support for the new claim is found throughout the application, for example, in original claim 19 and original claim 16. Accordingly, no new matter is added.

**Election of Species Requirement under 35 U.S.C. § 121**

The Examiner has required the election of a single disclosed species as "claim 1 is generic to a plurality of disclosed patentably distinct species" (Paper No. 9 at page 2).

Applicants traverse the Election of Species Requirement.

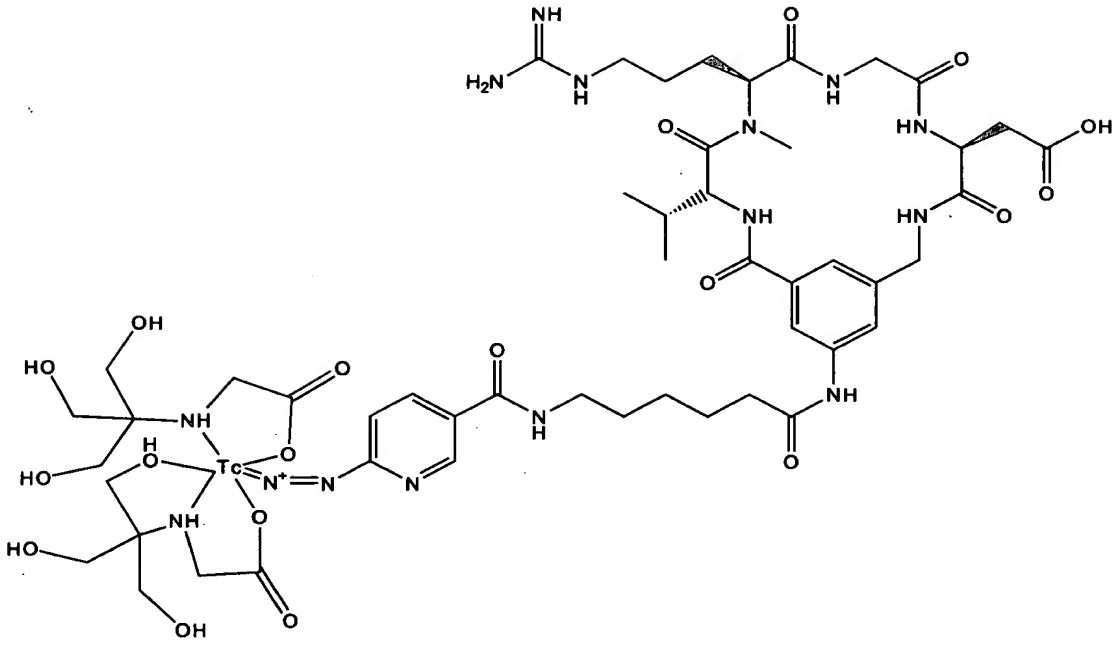
For an Election of Species Requirement to be proper, the MPEP states that "The particular reasons relied on by the Examiner for holding that the inventions as claimed are either independent or distinct, should be concisely stated. A mere statement of conclusion is inadequate. The reasons upon which the conclusion is based should be given." MPEP § 816.

In the present case, the Examiner has put forth no reasons whatsoever for the Election of Species Requirement and has, indeed, given a mere statement of conclusion. Accordingly, the Examiner has not complied with the requirements of the MPEP with regard to the requirement for an election of species and such requirement is, thus, improper.

In view of the aforesaid, applicants respectfully request reconsideration and withdrawal of the Requirement.

**Provisional Election of Species**

However, in order to comply with the Examiner's requirement to elect a single disclosed species, Applicants provisionally elect, with traverse, one of the species of Compound (V) on page 25, of formula:

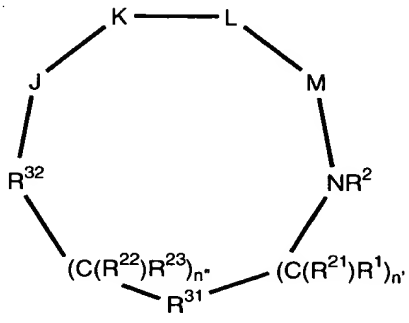


Also, as requested by the Examiner, Applicant characterize one of the methods of defining the elected species as follows:

$$|(Q)d'-L_n-C_{h'}|x-M_T(A_{L1})y(A_{L2})z$$

(I),

wherein,



Q is ;

$R^{31}$ is an aromatic carbocyclic ring system substituted with 1 $R^{10}$;

$R^{32}$ is -C(=O)-;

n" is 0;

n' is 1;

$R^1$ is hydrogen,

$R^{13}$ is selected independently from: H and C1 alkyl;

$R^{21}$ is hydrogen;

$R^2$ is H;

$R^{10}$ is $-NR^{13}C(=O)R^{13}$;

J is an L-isomer or D-isomer amino acid of structure $-N(R^3)C(R^4)(R^5)C(=O)-$, wherein:

$R^3$ is H;

$R^4$ is H;

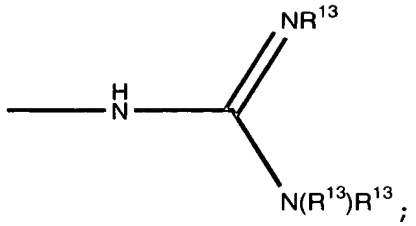
$R^5$ is $C_3$ alkyl;

K is a D-isomer or L-isomer amino acid of structure $-N-(R^6)CH(R^7)C(=O)-$, wherein:

$R^6$ is C1 alkyl;

$R^7$ is $-(C_3$ alkyl)X;

X is selected from:

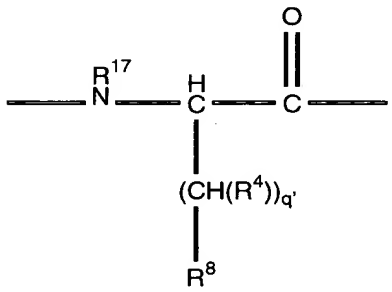


L is -Y(CH2)vC(=O)-, wherein:

Y is NH;

v = 1 or 2;

M is a D-isomer or L-isomer amino acid of structure



, wherein:

q' is 1;

$R^{17}$ is H;

d' is 1;

Ln is a linking group of formula:

$M^1$-[$Y^1$($CR^{55}R^{56}$)f($Z^1$)f"$Y^2$]f'-$M^2$,

wherein:

$M^1$ is -[(CH2)g$Z^1$]g'-($CR^{55}R^{56}$)g"-;

$M^2$ is -($CR^{55}R^{56}$)g"-[$Z^1$(CH2)g]g'-;

g is 0;

g' is 0;

g" is 0;

f is 4;

f' is 1;

f" is 0;

$Y^1$ is a bond;

$Y^2$ is NHC(=O);

$R^{55}$ and $R^{56}$ are independently hydrogen;

$M_T$ is a transition metal radionuclide;

$C_{h'}$ is a radionuclide metal chelator or bonding unit bound to the transition metal radionuclide of formula $R^{40}$ $R^{41}N$-N= ;

$R^{40}$ is a heterocycle substituted with 1 $R^{52}$;

$R^{41}$ is hydrogen;

$R^{52}$ is a bond to Ln;

$A_{L1}$ is a functionalized aminocarboxylate;

$A_{L2}$ is a functionalized aminocarboxylate;

x is 1;

y is 1; and